

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/006298

| A. CLASSIFICATION OF SUBJECT MATTER Int.Cl ⁷ A01K67/027, C07K16/18, C12N15/09 | | | | | | | | | | | | | | |
|--|---|--|-----------|--|-----------------------|-----|---|--------------------------|-----|---|-----------------------|---|---|------|
| According to International Patent Classification (IPC) or to both national classification and IPC | | | | | | | | | | | | | | |
| B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) Int.Cl ⁷ A01K67/027, C07K16/18, C12N15/09 | | | | | | | | | | | | | | |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched | | | | | | | | | | | | | | |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) BIOTECHNOLOGY ABSTRACT(DIALOG), BIOSIS(DIALOG), MEDLINE(STN), WPI(DIALOG), JSTPlus(JOIS), SwissProt/PIR/GeneSeq, GenBank/EMBL/DDBJ/GeneSeq | | | | | | | | | | | | | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X/A</td> <td>TAMURA Y., et al., CD14 transgenic mice expressing membrane and soluble forms: comparisons of levels of cytokines and lethality in response to lipopolysaccharide between transgenic and non-transgenic mice., Int.Immunol., (1999), Vol.11, No.3, p.333-9.</td> <td>1-3, 9-10/ 4-8, 11-15</td> </tr> <tr> <td>X/A</td> <td>WATANABE, C. et al., Enhanced immune responses in transgenic mice expressing a truncated form of the lymphocyte semaphoring CD100, J.Immunol., (2001), Vol.167, No.8, p.4321-8.</td> <td>1-2, 9/ 3-8, 10-15</td> </tr> <tr> <td>Y</td> <td>LU, W., et al., Characterization of a truncated soluble form of the abculovirus (AcMNPV) major envelope protein Gp64, Protein Expr.Purif., (2002), Vol.24, No.2, pages 196 to 201</td> <td>1-15</td> </tr> </tbody> </table> | | | Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. | X/A | TAMURA Y., et al., CD14 transgenic mice expressing membrane and soluble forms: comparisons of levels of cytokines and lethality in response to lipopolysaccharide between transgenic and non-transgenic mice., Int.Immunol., (1999), Vol.11, No.3, p.333-9. | 1-3, 9-10/ 4-8, 11-15 | X/A | WATANABE, C. et al., Enhanced immune responses in transgenic mice expressing a truncated form of the lymphocyte semaphoring CD100, J.Immunol., (2001), Vol.167, No.8, p.4321-8. | 1-2, 9/ 3-8, 10-15 | Y | LU, W., et al., Characterization of a truncated soluble form of the abculovirus (AcMNPV) major envelope protein Gp64, Protein Expr.Purif., (2002), Vol.24, No.2, pages 196 to 201 | 1-15 |
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| <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex. | | | | | | | | | | | | | | |
| * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family | | | | | | | | | | | | | | |
| Date of the actual completion of the international search 23 June, 2005 (23.06.05) | | Date of mailing of the international search report 12 July, 2005 (12.07.05) | | | | | | | | | | | | |
| Name and mailing address of the ISA/ Japanese Patent Office | | Authorized officer | | | | | | | | | | | | |
| Facsimile No. | | Telephone No. | | | | | | | | | | | | |

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| Y | HEFFERON, K.L., et al., Host cell receptor binding by baculovirus GP64 and kinetics of virion entry, Virology (1999), Vol.258, No.2, p.455-68 | 1-15 |
| Y | Toshihiko OTOMO et al., "Gp64 Hatsugen/CCR2 Knockout Mouse Narabini COR2 Hatsugen Baculovirus o Mochiita Kinoteki Kotai no Sakusei", Nihon Bunshi Seibutsu Gakkai Nenkai Program Koen Yoshishu, (2003), Vol.26, page 660 | 1-15 |
| Y | Norio KAMATA et al., "gp64 Hatsugen Mouse no Sakushutsu Narabini Hatsugagata Baculovirus ni Taisuru Tolerance Yudo", Nihon Bunshi Seibutsu Gakkai Nenkai Program Koen Yoshishu (2003), Vol.26, page659 | 1-15 |
| Y | WO 2003/104453 A1 (Chugai Pharmaceutical Co., Ltd.), 18 December, 2003 (18.12.03), Full text & AU 2003242024 A1 & EP 1514928 A1 | 1-15 |

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The matter common to claims 1 to 15 resides in a nonhuman animal carrying a gene encoding a soluble protein of a membrane protein.

However, a transgenic mouse carrying a gene encoding a soluble protein of a membrane protein was known in public on the priority date of the present case (see, Int. Immunol (1999), Vol.11, No.3, p.333-9, J.Immunol (2001), Vol.167, No.8, p.4321-8, etc.). Thus, this technical feature does not make a contribution over prior art, considering the disclosures in the above documents, and, therefore cannot be considered as a special technical feature. Furthermore, there is no the same or corresponding special technical feature.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.